Circular Economy



It has been defined as <u>a model of production and consumption</u>, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials & products for as long as possible.



Circular economy aims to increase the life cycle of products.

It is an alternative to a traditional <u>linear economy</u> (take, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.



Source: Instarmarc





Principles for circular economy systems

- No waste
- Renewable energy
- Closed production loops
- Material separability and traceability
- Industrial ecosystems
- Biomimicry

Principles for circular economy products

- Durability (extended life)
- Dematerialisation by design
- Ease of maintenance and repair
- Ease of disassembly/reassembly
- Potential for upcycling/re-purposing
- Material separation and recovery
- Keep materials in their highest value use, for as long as possible

The circular economy model: less raw material, less waste, fewer emissions





Source: European Parliament

Opportunities of the circular economy

Circular economy creates new opportunities for businesses to innovate and adopt sustainable practices.



ECONOMICS New business models



ENVIRONMENTAL Resources optimization



SOCIAL Relocalization of activities

Why do we need to switch to a circular economy?

It is important to switch to a circular economy to promote sustainability, reduce waste, slow down the use of natural resources, and limit biodiversity loss. The circular economy offers a \$4.5 trillion economic opportunity by reducing waste, stimulating innovation, and creating jobs. It can also reduce total annual greenhouse gas emissions. Additionally, adopting circular economy principles can help industries reduce their dependence on natural resources, increase profitability, and spur innovation.

The EU has several initiatives to promote a circular economy, including the recent circular economy Action Plan that aims for a carbon-neutral, sustainable, toxic-free, and circular economy by 2050.





Source: Pubblications Office of the European Union